UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte KARL PFLEGER and BRIAN LARSON

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Appeal 2010-000434
Application 10/802,958[1]
Technology Center 2100

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Decided: June 16, 2010

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Before JAY P. LUCAS, STEPHEN C. SIU AND DEBRA K. STEPHENS,
Administrative Patent Judges.

LUCAS, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal from a final rejection of claims 29 to 52 under
authority of 35 U.S.C. § 134(a). The Board of Patent Appeals and

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[1] Application filed March 17, 2004. The real party in interest is Google, Inc.

Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b). A telephonic oral hearing was held on June 8, 2010.

We affirm-in-part.

Appellants' invention relates to an improved method for presenting the results of a search for a topic over the Internet, for example by use of the search facility of the assignee, Google. In the words of Appellants:

> A search engine often retrieves a large number of documents for a broad query. For example, if a user enters a one or two-term query, such as "digital camera," the search engine is likely to return millions of results. Also, many different users may submit this broad query initially when searching about material related to digital cameras. Accordingly, the documents returned by these broad queries are often over-represented in the popularity counts, and the popularity count for each one of these results is artificially high because of the number of broad queries submitted. Also, documents returned in response to broad queries are often more abstract than results returned for more specific queries. The more abstract documents are then over-represented in the popularity counts, whether based on clicks or based on impressions.
> The resulting over-representation of documents due to broad queries tends to skew data collected about the users' behavior. When a user views a result set from a very broad query, the user will likely see only a small fraction of the entire result set. Therefore, it is difficult to, for example, determine the popularity of documents in the result set based on the users' response to documents resulting from a broad query.

. . . .

       Embodiments of the present invention comprise methods and systems for adjusting a scoring measure for a search result based at least in part on the breadth of a previously-executed search query associated with the search result. In one embodiment, a search engine deweights a popularity measure for a result when the value of the popularity measure has been increased as a result of the submission of one or more broad queries. The breadth of the query may be calculated in various ways.

(Spec. ¶¶ [0004], [0005], and [0009]).

Claim 29 and claim 41 are exemplary:

       29.   A method comprising:

       estimating a breadth of a search query;

       identifying user interaction with a first document in a result set that is responsive to the search query;

       changing a ranking of a popularity of the first document based at least in part on the user interaction with the first document and the breadth of the search query, wherein an amount of the change in the ranking of the popularity decreases with increased breadth of the search query; and

       making the rank of the popularity of the first document available for responding to a subsequent search query.

       41.   An article comprising one or more machine-readable media storing instructions

operable to cause one or more machines to perform operations comprising:

estimating a breadth of a search query;

identifying user interaction with a first document in a result set that is responsive to the search query;

changing a ranking of a popularity of the first document based at least in part on the user interaction with the first document and the breadth of the search query, wherein an amount of the change in the ranking of the popularity decreases with increased breadth of the search query; and

making the rank of the popularity of the first document available for responding to a subsequent search query.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Barrett	US 2003/0135490 A1	Jul. 17, 2003
Whitman	US 6,772,150 B1	Aug. 03, 2004
Conklin	US 6,363,378 B1	Mar. 26, 2002
Holt	US 6,601,061 B1	Jul. 29, 2003

REJECTIONS

The Examiner rejects the claims as follows:

R1: Claims 41 to 52 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

R2: Claims 29, 30, 33 to 42, and 45 to 52 stand rejected under 35 U.S.C. § 103(a) for being obvious over Barrett in view of Whitman.

R3:   Claims 31 and 43 stand rejected under 35 U.S.C. § 103(a) for being obvious over Barrett in view of Whitman and further in view of Conklin.

R4:   Claims 32 and 44 stand rejected under 35 U.S.C. § 103(a) for being obvious over Barrett in view of Whitman and further in view of Holt.

Appellants contend that claims 41 to 52 are statutory because they refer to stored instructions. They further contend that claims 29 and 41, and those dependent on them, are not rendered obvious over the cited prior art because the art is improperly combined in the rejections. The Examiner contends that each of the claims is properly rejected.

Examiner's note concerning a slight wording variation in the claims has been considered, and does not affect the outcome of this appeal (Ans. 3, middle). We trust the proper changes will be made during later prosecution, if any.

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 101 and 35 U.S.C. § 103(a). The first issue specifically turns on whether claim 41 and its dependent claims encompass non-statutory transitory signals. The second issue turns on the proper combinability of the references in the rejections under 35 U.S.C. § 103(a).

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

1. Appellants have invented a method of improving the presentation of search results from a search of the Internet using a search engine such as

the one available from the assignee of this application, Google, Inc. (For convenience, and with no attempt to dilute the Google trademark, we will hereinafter call such a search a Google-type search.) The presentation order of results from a Google-type search is based on a popularity measure or score (Spec. 3, top). Based on the ranking assigned to each web page or document, it will appear earlier or later in the list of search results (Spec. ¶ [0002]).

2. Appellants' improvement claimed in this application concerns adjusting the popularity measure dependent on the breadth of the search query (Spec. ¶ [0009]). That is, "a search engine deweights the popularity measure for results when the value of the popularity measure has been increased as a result of the submission of one or more broad queries." (*Id.*). A "breadth analyzer 126" (pun probably intended by Appellants) examines the user query using a number of disclosed techniques and adjusts the popularity score of the results accordingly (Spec. 9, 10).

3. The Barrett reference analyzes the results of a Google-type Internet search and organizes the references found in order of a popularity ranking (¶¶ [0009], [0010]). The popularity scoring is adjusted positively or negatively by various factors (¶¶ [0011], [0012]).

4. The Whitman reference suggests alternative search queries to a user in a Google-type search of the Internet (Col. 1, l. 65 to col. 2, l. 40). Related search queries are weighted by a scoring algorithm (Col. 2, l. 30). Part of this weighing of alternative search queries increases the score of search phrases that produce relatively small number of hits (Col. 3, l. 68; col. 5, l. 68).

PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of prima facie obviousness or by rebutting the prima facie case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

A claim for computer instructions embodied in a signal only is not considered by this office to be statutory under 35 U.S.C. 101. This policy has been confirmed by the Court of Appeals for the Federal Circuit in *In re Nuijten*. "A transitory, propagating signal like Nuijten's is not a 'process, machine, manufacture, or composition of matter.' Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter." *In re Nuijten*, 500 F.3d 1346, 1359 (Fed. Cir. 2007).

ANALYSIS

*Arguments with respect to the rejection
of claims 41 to52
under 35 U.S.C. § 101 [R1]*

The Examiner has rejected the noted claims for encompassing subject matter encoded as signals in transmission media (Ans, 11, bottom). Appellants argue that their claimed terms only covered "storing" media, and

that was described by the Specification as excluding the transmission devices (App. Br. 4, top).

Reviewing Appellants' Specification, it is clear that the claimed processor is in communication with "computer-readable media" storing instructions to be executed by the processor (Spec. 4, bottom). Further, as the Examiner has pointed out, "[e]mbodiments of computer-readable media include ... [a] transmission device capable of providing a processor ... with computer-readable instructions." (Spec. 5, top). Note that the media is also described as "wireless" (*Id.*). We thus take the plain meaning of the Specification, and accept that the specification encompasses storing program code on a transmission medium.

As we view the claims in light of the specification, we find the subject matter of the claims encompasses non-statutory transitory signal media. *See In re Nuijten,* cited above. We do not find that the Examiner has erred in this rejection.

*Arguments with respect to the rejection
of claims 29 to 52
under 35 U.S.C. § 103(a) [R2-R4]*

The Examiner has rejected the noted claims for being obvious over the combination of Barrett and Whitman, plus for claims 31, 32, 43, and 44 two other references.

The Examiner appreciates that Barrett does not teach adjusting the popularity ranking of documents in the retrieved set in accordance with the breadth of the search query (Ans. 15, bottom). Rather, the Examiner relies

upon Whitman for that teaching (*Id.*). However, Appellants argue that Whitman does not "rank the popularity of documents at all. Rather, Whitman describes a search refinement system that uses a history of search queries to generate related search phrases." (App. Br. 7, bottom) (emphasis omitted). We agree that Whitman does not supply the teaching missing from the Barrett patent. Whitman relies upon query breadth, but only for ranking one search query against another search query. We have considered the Examiner's argument that Whitman is only used for the teaching of adjusting "a score based on query breadth." (Ans. 14, middle). However, the significance of that teaching with regard to search results, not queries, is only recognized because of the teachings of the Appellants, in hindsight. This is not a permissible basis for combining references. "A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 421 (2007).

We thus find error in the Examiner's rejections [R2 to R4] under 35 U.S.C. § 103(a).

CONCLUSIONS OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner erred in rejecting claims 29 to 52 under 35 U.S.C. § 103(a). We do not find error in the rejection of claims 41 to 52 under 35 U.S.C. § 101.

DECISION

We affirm the Examiner's rejection [R1] of claims 41 to 52 under 35 U.S.C. § 101. We reverse the Examiner's rejections [R2 to R4] of claims 29 to 52.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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